

REPLACED BY  
ART 34 AMDT

overall location update procedure.

Brief Summary of the Invention

5           According to the present invention in a first aspect there is provided a method of use of a UMTS telecommunications network, comprising utilising UMTS signalling to indicate changes in an IP sub-network.

10           According to the present invention in a second aspect there is provided a method for a mobile terminal associated with a UMTS telecommunications network to register its position and/or update its location with regard to UMTS and IP registration, comprising integrating UMTS and IP procedures.

15           Mobile-IP specifications allow for link-layer mechanisms to be used to discover a foreign agent (FA) or to detect a change in the sub-network. In a preferred embodiment of the invention, accordingly, the UMTS level mobility-management (link-layer) is used for FA discovery.

20           More specifically, the method may comprise using UMTS 'register request' and 'register complete' messages for detecting FA information.

          Preferably, additional fields of information are sent with the 'register req' message and with the 'register complete' message.

25           The fields which may be sent with the 'register req' message are: (1) type of home address, (2) type of COA (care of address), (3) home IP address, (4) home agents address, and (5) last used COA.

30           The additional field for the 'register complete' messages may be (1) home address, (2) COA type and (3) COA.

**CLAIMS**

1. . . . A method of use of a UMTS telecommunications network, comprising utilising UMTS signalling to indicate changes in an IP sub-network.  
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2. . . . A method for a mobile terminal associated with a UMTS telecommunications network to register its position and/or update its location with regard to UMTS and IP registration, comprising integrating UMTS and IP procedures.  
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3. . . . A method as claimed in Claim 2, comprising a method for a mobile terminal to register its position with regard to UMTS and IP registration, the method comprising using UMTS 'register request' and/or 'register complete' messages for detecting IP information.  
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4. . . . A method as claimed in Claim 3, wherein fields of information relevant to the IP domain are sent with the 'register req' message.
5. . . . A method as claimed in Claim 4, wherein the fields (in case the mobile  
20 terminal is IP capable) are: (1) type of home address, (2) type of care of address (COA), and, optionally, any of the following: (3) home IP address, (4) home agents (HA) address and (5) last used COA.
6. . . . A method as claimed in Claim 5, wherein additional fields of information  
25 are sent with the 'register complete' message.
7. . . . A method as claimed in Claim 6, wherein the fields comprise (in case the mobile terminal is IP capable) (1) home address, (2) COA type and (3) COA.
- 30 8. . . . A method as claimed in any preceding claim, comprising a method for a

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mobile terminal to update its location, wherein the method comprises using UMTS 'location update' and/or 'location update complete' messages to detect IP information.

5     9.     A method as claimed in Claim 8, wherein additional fields of information relevant to the IP domain are sent with the 'location update' message.,

10     10.     A method as claimed in Claim 9, wherein the additional fields comprise (in case the mobile terminal is IP capable) (1) home address, (2) COA type and (3) COA.

11.     A method as claimed in any of Claims 8 to 10, wherein additional fields are sent with the 'location update complete' message.

15     12.     A method as claimed in Claim 11, wherein the additional fields comprise (in case the mobile terminal is IP capable) (1) type and (2) COA.

20     13.     A method of using a UMTS communication network, substantially as hereinbefore described with reference to, and as illustrated by, Figures 3 and 4 of the accompanying drawings.

# PATENT COOPERATION TREATY

EO/US  
PCT/EP00/05705

**PCT**

**NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

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Applicant:

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1. The designated Office is hereby notified of its election made:



in the demand filed with the International preliminary Examining Authority on:

05 February 2001 (05.02.01)



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